

R E M A R K S

Claims 3 to 9 and 11 as set forth in Appendix II of this paper are now pending in this case. Claims 1, 2 and 10 have been canceled, Claims 3 to 9 have been amended, and Claim 11 has been added, as indicated in the Listing of Claims set forth in Appendix I of this paper.

Applicants have amended Claim 3 to relate to a method of using the chroman based on the wording of Claim 9 in conjunction with the disclosure on page 2, indicated lines 21 to 36, of the application. Claims 4 to 8 have been revised accordingly. Claim 9 has been amended to relate to the subject matter of Claim 10. New Claim 11 has been added which specifies the concentration of the preparation defined in Claim 9 as set forth in Claim 8 with regard to the method. No new matter has been added.

The Examiner has rejected Claims 1 to 8 under Sections 101 and 112, ¶2, for being drawn to a "use" without reciting the requisite process step. Applicants have canceled Claims 1 and 2, and have amended the Claims 3 to 8 to relate to a method which requires the application of the chroman Ia in effective amounts. Withdrawal of the Examiner's rejection is, therefore, respectfully solicited.

The Examiner has rejected Claims 9 and 10 under 35 U.S.C. §103(a) as being unpatentable in light of the disclosure of *Jiang et al.* (CA 134:759916, (2000) which reports an article published in *PNAS* 97(21), 11494-11499 (2000)<sup>1)</sup>). The respective publication relates to the inhibition of cyclooxygenase activity in macrophages and in epithelial cells with  $\gamma$ -tocopherol and with its major metabolite  $\gamma$ -CEHC. The authors report that their investigations with  $\alpha$ -tocopherol showed no effect on epithelial cells. Investigations with  $\alpha$ -CEHC are not reported<sup>2)</sup>.

Applicants' formula Ia represents  $\alpha$ -CEHC<sup>3)</sup>. Applicants have found that the application of effective amounts of  $\alpha$ -CEHC protect the human skin and the human hair against aging processes and harmful environmental effects. The Examiner will note that  $\alpha$ -tocopherol differs

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1) A copy of *Jiang et al.*'s article is herewith enclosed for the Examiner's convenience.

2) For the structural formulae of  $\alpha$ -tocopherol,  $\alpha$ -CEHC,  $\gamma$ -tocopherol and  $\gamma$ -CEHC see the attached Appendix III.

3) Note, for example, page 4, indicated line 10 et seq., of the application.

structurally from  $\gamma$ -tocopherol in the presence of a methyl group in 5-position of the chroman ring.

*Jiang et al.*'s teaching that  $\alpha$ -tocopherol, in contrast to  $\gamma$ -tocopherol, had no effect on epithelial cells shows that it is not possible in this particular area to assume that a homolog, ie. a compound which merely differs in one  $\text{CH}_2$  moiety, will have similar properties. Accordingly, a person of ordinary skill in the pertinent art cannot reasonably expect that the effect on epithelial cells which is found when  $\gamma$ -CEHC is employed will equally be found when a compound which structurally differs from  $\gamma$ -CEHC due to a  $\text{CH}_3$  group in 5-position of the chroman ring, namely  $\alpha$ -CEHC, is used. Based on the teaching of *Jiang et al.*, a person of ordinary skill in the pertinent art could therefore not reasonably expect to find any beneficial effects when  $\alpha$ -CEHC is applied to the skin or the hair.

It is well established that a compound and its properties are inseparable<sup>4</sup>), and that the inventive subject matter as a whole, which is referred to in the statute, embraces not only the subject matter particularly recited in the claims, but also the properties which are inherent in the particular combination of features defined in the claims, as well as the problem which is solved<sup>5</sup>).

Favorable reconsideration of the Examiner's position and withdrawal of the rejection under Section 103(a) is therefore respectfully solicited.

The method which is defined in Claims 3 and further specified in Claims 4 to 8 relates to the utilization of  $\alpha$ -CEHC for protecting the skin and the hair, and the reasons set forth with regard to Claims 9 and 11 are equally applicable where the obviousness of Claims 3 to 8 in light of the teaching of *Jiang et al.* is concerned.

In light of the foregoing and the attached, the application should be in condition for allowance. Early action is respectfully solicited.

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4) ie. *In re Papesch*, 315 F.2d 281, 137 USPQ 43 (CCPA 1963)

5) ie. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); *In re Wright*, 848 F.2d 1216, 6 USPQ2d 1959 (Fed. Cir. 1988), overruled on other grounds in *In re Dillon*, 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1990) (*en banc*), cert. denied 500 U.S. 904 (1991)

REQUEST FOR EXTENSION OF TIME:

It is respectfully requested that a one month extension of time be granted in this case. A check for the \$110.00 fee is attached.

Please charge any shortage in fees due in connection with the filing of this paper, including Extension of Time fees, to Deposit Account No. 11.0345. Please credit any excess fees to such deposit account.

Respectfully submitted,  
KEIL & WEINKAUF



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Encl.: THE LISTING OF CLAIMS (Appendix I)  
THE LISTING OF CLAIMS (Appendix II)  
STRUCTURAL FORMULAE (Sppendix III)  
Jiang et al., NPAS 97(21), 11494-11499 (200)

HBK/BAS

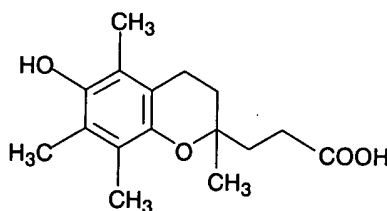
## A P P E N D I X I:

THE LISTING OF CLAIMS (version with markings):

1. (canceled)

2. (canceled)

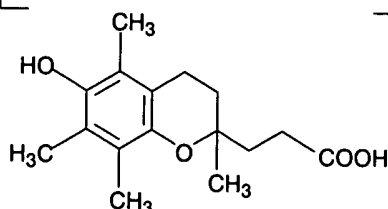
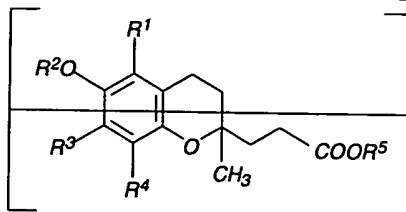
3. (currently amended) ~~[The use of]~~ A method for protecting human skin or human hair against aging processes or harmful environmental effects which comprises applying to the skin or the hair an effective amount of a chroman ~~[derivative as claimed in claim 1 having the]~~ of formula Ia



Ia.

4. (currently amended) The ~~[use as claimed in claim 1]~~ method of claim 3, wherein the chroman is applied for prophylaxis against aging processes of the human skin.
5. (currently amended) The ~~[use as claimed in]~~ method of claim 4, wherein the chroman is applied for prophylaxis against dry skin, wrinkle formation and/or pigment disorders.
6. (currently amended) The ~~[use as claimed in claim 1]~~ method of claim 3, wherein the chroman is applied for prophylaxis against aging processes of human hair.
7. (currently amended) The ~~[use as claimed in]~~ method of claim [1] 3, wherein [at least one of the compounds of the formula I is present in an] the effective [content in] amount of the chroman is applied by way of applying a cosmetic [preparations] preparation.
8. (currently amended) The ~~[use as claimed in]~~ method of claim 7, wherein [at least one of the compounds of the formula I is present] the cosmetic preparation contains the chroman in concentrations of from 0.01 to 30% by weight, based on the total amount of the cosmetic preparation.
9. (currently amended) A cosmetic preparation for protecting the human epidermis or human hair, which comprises, in a cosmetically suit-

able carrier, a cosmetically effective amount of [~~at least one of the compounds~~] a chroman of [~~the~~] formula Ia



~~[in which the substituents R<sup>1</sup> to R<sup>5</sup> have the meanings defined according to claim 1.]~~

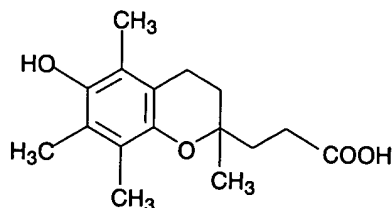
10. (canceled)

11. (new) The cosmetic preparation defined in claim 9, which comprises the chroman in an amount of from 0.01 to 30% by weight, based on the total weight of the preparation.

## A P P E N D I X II:

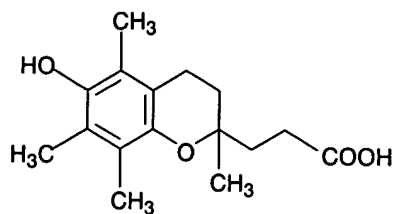
THE AMENDED CLAIMS (clean version):

1. (canceled)
2. (canceled)
3. (currently amended) A method for protecting human skin or human hair against aging processes or harmful environmental effects which comprises applying to the skin or the hair an effective amount of a chroman of formula Ia



Ia.

4. (currently amended) The method of claim 3, wherein the chroman is applied for prophylaxis against aging processes of the human skin.
5. (currently amended) The method of claim 4, wherein the chroman is applied for prophylaxis against dry skin, wrinkle formation and/or pigment disorders.
6. (currently amended) The method of claim 3, wherein the chroman is applied for prophylaxis against aging processes of human hair.
7. (currently amended) The method of claim 3, wherein the effective amount of the chroman is applied by way of applying a cosmetic preparation.
8. (currently amended) The method of claim 7, wherein the cosmetic preparation contains the chroman in concentrations of from 0.01 to 30% by weight, based on the total amount of the cosmetic preparation.
9. (currently amended) A cosmetic preparation for protecting the human epidermis or human hair, which comprises, in a cosmetically suitable carrier, a cosmetically effective amount of a chroman of formula Ia



1a.

10. (canceled)

11. (new) The cosmetic preparation defined in claim 9, which comprises the chroman in an amount of from 0.01 to 30% by weight, based on the total weight of the preparation.

## A P P E N D I X III:

STRUCTURAL FORMULAE: